

***DM Series™ Digital Mailing Machine
Constant Connection
Technical Support Configuration Guide***

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Engineering the flow of communication™

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Confidentiality

The information contained within this manual is proprietary and should only be disclosed to your Information Technology (IT) Department or designated network administrator while setting up a LAN/Firewall configuration for an Ethernet enabled, DM Series™ Digital Mailing System Meter. This manual contains materials and procedures related to the meter's access to postal meter services provided by Pitney Bowes Inc. ("Pitney Bowes"). Consequently, no part of this document may be reproduced in any form or by any means without the express permission of an authorized representative of Pitney Bowes.

Limitations of this Manual

This manual provides confidential information to support customer efforts to identify and execute a LAN/Firewall configuration that best fits the organization's unique computing environment. All recommendations in this guide are based on current industry practices for general security and firewall security, but may be superseded as circumstances change the environment associated with your organization's configuration, or with the Pitney Bowes architecture supporting the DM Series™ Digital Mailing System Meter. Pitney Bowes will provide notification of changes and associated recommendations as changes occur from time to time. However, it is the responsibility of the individual organization to secure its own Network to the Pitney Bowes connection.

Guidelines for Support Personnel

The manual is designed for the technical support person in your organization who is responsible for determining how the business will connect the Ethernet enabled meter to your corporate LAN, and set up firewall access to the Internet. Because of the multitude of Networks in use by our customers, Pitney Bowes cannot provide individual guidance with respect to each organization's infrastructure characteristics. We will however, provide all of the necessary information for each customer to provide a secure connection to the Pitney Bowes infrastructure for the services necessary to operate the Ethernet enabled meter in your secure Network environment. Pitney Bowes does have a Customer Support hotline for assistance during the process as set forth herein. They can be reached at 800-522-0020.

Overview

Background

Pitney Bowes offers a wide range of products and solutions, including those relating to accounting, addressing, mailing systems, scales, sorters, inserters, integrated web technologies, and productivity software to its customers. One of the many products it offers is the DM Series™ Digital Mailing Systems. These systems are managed by proprietary software that allows the meter to perform postage refills, as well as receive software downloads via a dial-up modem connection to Pitney Bowes Servers. Additionally, the software now offers the enhanced capability of supporting an Ethernet enabled connectivity option, providing faster refills and software downloads in a secure environment.

Meter Security Overview

DM Series™ Digital Mailing System Meters supports a wide variety of security features.

The meter provides data security during sensitive data transmissions. While connected to a Pitney Bowes Server for postage refills, the meter uses public and private keys to authenticate and authorize the refill information. No private personal account or other sensitive information is transmitted between the meter and Pitney Bowes.

On most meters, administrative features include the ability to limit access to meter functionality to authorized users via a four (4)-digit lock code. On these meters, a supervisor password can be added to restrict access to all or some of the administrative functionality. Once enabled, the lock code is required at start-up to access the meter. When using the lock code functionality, a timeout associated with inactivity relocks the meter, requiring the reentry of the lock code before using it again. For more information on this feature, please consult the user guide that came with your system.

The meter also provides a simple Host-based firewall, which can be configured to trust all, trust none, or trust Host only. This feature is designed to permit secure communication between itself and PC based add-on packages.

ICSA Labs Premier Services (“ICSA Labs”), a company specializing in custom evaluation and certification testing services for information technology products, recently conducted administration, vulnerability, data security, functional security, logging and persistence testing on the meter running version 17 Mega software at their facility.

As a result of such testing, ISCA Labs certified that the Ethernet enabled DM Series™ Digital Mailing System Meter is qualified to operate securely over an

Ethernet connection, is not vulnerable to exploitation, and will not introduce any vulnerability to an existing customer Network. In addition, ICSA Labs validated that the meter correctly and successfully expedited postage refills and software downloads.

Network Considerations

The DM Series™ Mailing System Meters are equipped with USB ports that allow the connection of a USB Ethernet adaptor, with standard RJ45 connectors, to the relevant equipment and can be plugged directly into the customer's Network.

Setup of the Constant Connection Parameters

Your Network Administrator may need to change some firewall settings to allow the meter to communicate over the Internet to Pitney Bowes. Specifically, the meter may need access to Pitney Bowes' servers by allowing outbound HTTP (80) and FTP (21) access to 199.231.32.0/20 through the firewall.

If your network uses Static IP addressing, then the network department will need to provide an IP address, Subnet Mask, and Default Gateway for entry into the meter.

Dynamic or Static IP Addressing

The DM Series™ meter supports both dynamic (table 1) and static (table 2) IP addressing. The IP address is defaulted to automatic addressing from a DHCP Server. You will be required to identify the following using your specific system's meter menus:

Table 1: Network Uses Dynamic IP Addresses

DM500 through DM1000	DM300c through DM450c
1. Press the Menu key on the meter	1. Press the Menu key
2. Choose Set Up	2. Choose Data Center Options
3. Choose Phone/Network Set Up	3. Choose Network Settings
4. Choose More Options (down arrow)	4. Verify that Get IP is set to Auto
5. Choose Network Settings	5. Press the Enter key
6. Choose Mailing System Network Settings	6. Press the Home key to return to the Mail Run Screen
7. Choose Get IP Address	
8. Choose Get IP Address Automatically	
9. Choose Exit Set up	

Table 2: Network Uses Static IP Addresses

DM500 through DM1000	DM300c through DM450c
1. Press the Menu key on the meter	1. Press the Menu key
2. Choose Set up	2. Choose Data Center Options
3. Choose Phone/Network Set Up	3. Choose Network Settings
4. Choose More Options (down arrow)	4. Choose Get IP
5. Choose Network Settings	5. Choose Specify Address Manually
6. Choose Mailing System Network Settings	6. Choose IP Addr , press the Clear key and then enter the value determined by your network administrator. Press the enter key to accept
7. Choose Get IP Address	7. Choose Subnet , press the Clear key and then enter the value determined by your network administrator. Press the enter key to accept
8. Choose Specify an IP Address	8. Choose Gateway , press the Clear key and then enter the value determined by your network administrator. Press the enter key to accept
9. Choose IP Address , press the Clear key and then enter the value determined by your network administrator. Press the Enter key to accept	9. Press the Enter key to save your changes
10. Choose Subnet Mask , press the Clear key and then enter the value determined by your network administrator. Press the Enter key to accept	10. Press the Home key to return to the Mail Run Screen
11. Choose Default Gateway , press the Clear key and then enter the value determined by your network administrator. Press the Enter key to accept	
12. Choose Exit Set up	

Port Information

DM Series™ Mailing Systems require opening Port 80 (HTTP) and Port 21 (FTP) for communications to Pitney Bowes Servers. Port 80 is used to communicate XML formatted messages requesting services from Pitney Bowes' postal and services related Servers. Port 21 is used to transmit new software and graphics to the meter.

Other ports are used, and must be opened, depending upon additional packages that may be used in conjunction with the meter. This will be covered in separate documents available with the purchase of these options from Pitney Bowes. Available add-on packages include:

- Business Manager – Business Manager Configuration White Paper
- DFWorks™ – Systems Configuration – Network Ports Configuration

Firewalls

It is recommended that all DM Series™ Digital Mailing System Meters be connected through a firewall. This is especially true when PCs are part of a Pitney Bowes Mailing System.

If unrestricted outbound access is not allowed in a particular organization, then Network access to Pitney Bowes' servers is accomplished by allowing outbound HTTP (80) and FTP (21) access to 199.231.32.0/20 through the customer's firewall.

It should be noted that if a particular firewall supports unrestricted access to these ports, then the meter will automatically connect to Pitney Bowes' services when the customer initiates a request from the meter, such as a refill request or a software download.

Connecting to the Network

1. Connect the Compact USB Network Adaptor to an available USB port on the Mailing Machine or USB Hub.
2. Connect the network cable to the RJ45 port on the USB Network Adaptor and your network jack

Enabling Constant Connection

The meter comes with the LAN feature present, but this feature must be selected for use before it becomes active. Once Internet access has been enabled through the firewall by your IT representative, Constant Connection needs to be established by doing the following:

DM500 through DM1000	DM300c through DM450c
1. Press the Menu key on the meter	1. Press the Menu key, go to: Data Center Options > Network Settings
2. Choose Set Up	2. Verify that ' Get IP ' is set to ' Auto '.
3. Choose Phone/Network Set Up	3. Press the down arrow and verify that the ' MAC Addr ' field is populated. This indicates the Mail Machine's NIC Card is working.
4. Choose Modem Type	4. Press the Enter key and then the Home key
5. Choose Use LAN	5. The LAN should be setup to run now.
6. Choose Ok, Restart Now	6. Attempt a Balance Inquiry to confirm it works.

The meter will now be enabled for use over your network.

Checking Connectivity

To check connectivity, you may perform a balance inquiry by following the steps below:

DM500 through DM1000	DM300c through DM450c
1. Verify the Network Adapter LED is On or flickering	1. Verify the Network Adapter LED is On or flickering
2. Press the Funds key	2. Press the Refill Postage key
3. Choose Get Postage by Phone® Balance	3. Choose Check PBP Balance
4. The following should occur in quick succession	4. The following should occur in quick succession
a. Display of Requesting Balance	a. Display of Requesting Balance
b. Display of Processing	b. Display of Processing
c. Display of Actual Balances	c. Display of Actual Balances
5. Press Done to Exit	5. Press Continue to Exit

If an error message is delivered, please review these Set Up instructions again with regards to the meter, and check the firewall parameter settings before continuing.

Service Support

Service Support on LAN connectivity can be obtained by calling 1.800.522.0020